TURBO PLUS

* Turbo Tape (10 times faster loading and storing from cassette).
* 14 additional BASIC commands.
* BASIC programmes scroll forwards and backwards.
* Use of Plus/4 software also with cassette.

TURBO PLUS

The TURBO PLUS module expands your C16 (116) or Plus/4 by a number of useful commands and characteristics. Just plug it in and the following new functions will be permanently at your disposal:

1. **TURBO TAPE** - Built-in Turbo Tape with which all cassette functions (LOAD, SAVE, VERIFY and MERGE) run approx. 10 times faster. All the contents of the computer's memory (60K max.) can be loaded and saved.
2. **BASIC COMMANDS** - A number of additional BASIC commands (CHANGE, DMERGE, DUMP, DVERIFY, EXOFF, EXON, FIND, KILL, MERGE, OLD, SCROLLOFF, SCROLLON, TUROFF and TURON) simplify programming.
3. **SCROLLER** - BASIC listing can be scrolled forwards or backwards using the cursor keys (even within a window)! By so doing, you can eliminate the annoying "LIST from . . . to".
4. **PLUS 4 EXPANSION** - Three of the four Plus 4 built-in programmes (graphics, wordprocessing and calculation) can now be run on cassette or diskette. Cassettes can be used with Turbo Tape or as normal. What is more, the software fault in the data filing system (version V052084), that appears in data files with more than 255 entries, is rectified.

TURBO PLUS -
Operating instructions for Commodore C-16 & Plus 4

INSTALLATION

Switch your computer off and plug the TURBO PLUS module into the MEMORY EXPANSION socket at the back. Make sure that the component side is at the top and that the module fits tightly. Now switch the computer on again. The screen should now read:

COMMODORE BASIC V3.5 xxxxx BYTES FREE

TURBOPLUS V1.0 (C) 1987 BY KINGSOFT
WRITTEN BY ANDREAS ARENS

Depending on the storage capacity, the computer will show 12277, 28661 or 60671 instead of xxxxx.

INSTRUCTIONS

The TURBO PLUS module was developed to complement your C-16 or Plus 4 with a number of useful commands and expansions. The following instructions have been divided into four chapters according to the TURBO PLUS functions: TURBO TAPE, BASIC COMMANDS, SCROLLER and PLUS/4 EXPANSION.

1. TURBO TAPE

You can work with your computer as usual, i.e. write programmes and SAVE them. Saving is now approx. 10 times as fast as before. TURBO saved programmes load very fast. When loading, you will note that the screen remains switched on during loading and the striped frame shows the loading procedure.

Should you wish to load or save a programme at normal speed, you can either switch the Turbo Tape off using TUROFF (see chapter 2), or you can use a secondary address:

Loading of BASIC programmes with Turbo: LOAD "name"

Loading of machine language programmes with Turbo:
LOAD "name",1,1

Loading of BASIC programmes without Turbo:
LOAD "name",1,2

Loading of machine language programmes without Turbo:
LOAD "name",1,3

The same applies for the SAVE command.

Besides, Turbo Tape also works with machine language programmes that are saved from the machine language monitor with S and loaded with L.

If you wish to save BASIC programmes that work in high resolution mode (GRAPHIC 1-4) using Turbo Tape, you must clear the graphic store using GRAPHIC CLR beforehand, otherwise problems can occur. If you have a C-116 or C-16 with 16K-RAM memory expansion (initial screen reading: 28661 BYTES FREE) you must, in this case, give the following instruction in one line: POKE 56,255 : GRAPHIC CLR : POKE 56,127, due to a small fault in the computer system.

2. BASIC COMMANDS

The following is a summary of all the additional new BASIC commands that TURBO PLUS offers. Please note that all these commands only function in direct mode, i.e. not within a programme.

CHANGE old, new (,z1 (–z2))

old = Search string (see FIND)
new = Replacement string
z1 = First line
z2 = Last line
The whole programme is searched if specifications are omitted.

The CHANGE command is nothing but a FIND command, with which the found programme parts are replaced with new ones.
EXAMPLES:
CHANGE A$,B$
searches the complete programme for A$ and replaces it with B$.
CHANGE INPUT#4,INPUT#3,200–
replaces from line 200 to the end.
CHANGE "JOHN", "JIM",50–800
replaces within lines 50 to 800.

DUMP

The command DUMP lists all single variables used (no fields) and their content. The order of the output is according to your order definition in the programme. The listing can be halted by pressing the SHIFT key and aborted by STOP.

DMERGE a$

a$ = Programme name
With DMERGE you can mix programmes from disk. It works like the MERGE command in analogy to LOAD/DLOAD, SAVE/DSAVE, and VERIFY/DVERIFY.

DVERIFY a$

a$ = Programme name
With DVERIFY you can verify programmes from disk. It works like the VERIFY command in analogy to LOAD/DLOAD, SAVE/DSAVE and MERGE/DMERGE.

EXOFF / EXON

As you can see in chapter 4, the TURBO PLUS allows cassette owners to use the built-in software with a recorder. EXOFF switches this possibility off again. This is sensible if you only work with diskette and do not want to answer the question DISK OR TAPE every time. EXON reactivates the question.

FIND searchstring (,z1 (–z2))

searchstring = any BASIC command or text.
z1 = First line
z2 = Last line
The whole programme is searched if specifications are omitted.
With the FIND command you have your programme searched for any command or text. The lines found are listed on the screen. When searching for text, it must be put in inverted comma; the inverted commas themselves will not be searched.

EXAMPLES:
FIND ?
searches the complete programme for PRINT commands.
FIND A$+CHR$(0),500–
searches from line 500 to the end.
FIND "HALLO",–2000
searches up to line 2000.

KILL

With KILL you can switch the additional BASIC commands of TURBO PLUS off again.
To switch off all module functions, give the following instructions: TUROFF : EXOFF : SCROLLOFF : KILL

MERGE a$ (,b)

a$ = Programme name
b = Device-Nr. Standard=1 (cassette)
With the MERGE command you can mix BASIC programmes from disk or cassette with programmes on storage. Using cassette you can also MERGE programmes saved with TURBO PLUS (see also TURON or TUROFF respectively).

The requested programme is sorted into the existing one according to line numbers. This way you can easily bind existing sub-programmes into your programme.

Attention! It is possible that the MERGE command may take quite some time (after all, it does push your programme to and fro all the time). The loading procedure takes place at normal speed, then the sorting starts. Therefore the machine gives the impression of having "dropped out". Please wait, it will report back.

OLD
With OLD you can restore a BASIC programme that has been deleted by NEW or reset. All BASIC indicators for programme end etc. as well as the line interlink will be newly calculated.

SCROLLOFF / SCROLLON
With SCROLLOFF you can switch off the built-in scroller (see chapter 3). This could be necessary with certain programmes. SCROLLON switches it back on.
On initial start up the scroller is activated.

TUROFF / TURON
With TUROFF you can switch off the built-in Turbo Tape (see chapter 1). Loading and saving from cassette then works quite normally at slow speed. TURON switches it back on.
On initial start up the Turbo Tape is activated.

3. SCROLLER

To LIST a BASIC programme you normally have to indicate the part you want to see with: LIST from....to. With TURBO PLUS this is now much simpler: as soon as there is a line of BASIC on the screen you can look at all the lines before and after using the cursor keys. Just press the key CURSOR DOWN until the cursor arrives at the bottom end of the screen. As you can see, the successive BASIC lines appear on the screen. Accordingly you can look at and change previous lines with CURSOR UP. You will find, that in doing so you can analyse and edit programmes considerably faster.
By the way, the scrolling also works if you have defined a window in which to LIST a programme. Care should be taken with ESC functions. If, for example, you have activated the insertion mode with ESC-A, the scroller does not work. The same applies if you are in the inverted comma mode.

4. PLUS/4-EXPANSION

The Plus/4 built-in software can normally only be used with disk. With TURBO PLUS, however, you can now opt to use 3 of the 4 built-in programmes (wordprocessing, calculations and graphics) with cassette.

If you call up the command mode of the built-in software with CBM-C, and wish to load or save a file with LF or SF the following appears on the screen after input of the file name:

DISK OR TAPE D/T?

Just put T in if you are working with cassette, otherwise the built-in software characteristics remain as before. Depending on whether you have switched the Turbo Tape on or off (with TURON or TOROFF) saving takes place at the corresponding speed. If you always work with disk you can use the BASIC command EXOFF to eliminate this question; you will find more details in chapter 2.

Unfortunately, the built-in data filing system cannot be used with a cassette recorder, as relative files are only possible with disk. As you probably know, the version V052084 (appears after initiating the software) has a fault in the data filing system, that appears in data files with more than 255 entries (records). TURBO PLUS automatically checks whether your computer has this version and corrects the fault.

We hope that with these instructions we have had succeeded in acquainting you with TURBO PLUS. Should you have any ideas, criticisms (positive or negative), suggestions for improvement etc. to the programme or the instructions, please write to us.

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